**Ranchers Bristle as Gas Wells Loom on the Range**

December 29, 2002 By BLAINE HARDEN and DOUGLAS JEHL

GILLETTE, Wyo. - As it runs through Orin Edwards's ranch, the Belle Fourche River bubbles like Champagne. The bubbles can burn. They are methane, also called natural gas, the fuel that heats 59 million American homes. Mr. Edwards noticed the bubbles two years ago, after gas wells were drilled on his land. The company that drilled the wells denies responsibility for the flammable river.

An hour's drive west, the artesian well on Roland and Beverly Landrey's ranch has failed. After producing 50 gallons a minute for 34 years, the well, the ranch's only source of water, stopped flowing in September. A well digger who examined it blames energy companies drilling for gas nearby, but the companies dispute that. So the couple - he is 83 and ailing; she describes herself as "no spring chicken" - hauls water in gallon jugs and drives 30 miles to town weekly to wash clothes and bathe.

Dave Bullach, a welder who lives near Gillette, couldn't take it anymore. For two sleep-deprived years, he endured the incessant yowl of a methane compressor, a giant pump that squeezes methane into an underground pipeline. There are thousands of these screaming machines in Wyoming, where neither state nor federal law regulates their noise. Mr. Bullach stormed out of his house at midnight last year with a rifle and shot at the compressor until a sheriff's deputy hauled him off to jail.

This is the cantankerous world of energy extraction in the Rocky Mountain West, where natural gas is abundant and cheap to remove, and where the Bush administration, in its aggressive push to increase domestic energy production, is on the brink of approving the largest-ever gas-drilling project on federal land. Here in Wyoming's Powder River Basin, the Bureau of Land Management says that early next year it will give final approval to the drilling of 39,000 wells on eight million acres.

With natural gas consumption expected to soar in the next two decades, no one questions the need for new sources of this clean-burning fossil fuel. What alarms ranchers, along with environmental groups, is the hugely disruptive process of getting gas out of all those wells.

It is a 15-year-old drilling technique called coal-bed methane extraction, which can turn ranches and prairies into sprawling industrial zones, laced with wells, access roads, power lines, compressor stations and wastewater pits.

Stoking local outrage, the split nature of land ownership in much of the West, with mineral rights owned separately from surface rights, allows energy companies to operate on ranchers' land without their consent. Environmentalists also doubt whether energy companies can actually remove - in a way that is profitable and ecologically sound - the enormous amounts of methane that federal experts say is available in Western coal seams.

"Ranchers have never truly thought much of tree-hugging environmentalists," said John Dewey, 76, who owns a small cattle ranch outside Sheridan, Wyo. **"But with these**

**methane boys on our land, we are starting to see these environmentalists as conservationists who want to help us preserve land for our kids."**

Most natural gas in the Rocky Mountain West lies fairly close to the surface, in coal seams, trapped under huge aquifers. To get to the gas, water is pumped out, peppering the landscape with large numbers of relatively cheap and shallow wells.

Oddly, in an arid region prone to persistent drought, the primary waste product - and environmental threat - of extracting coal-bed methane is water, in phenomenal amounts. In the Powder River Basin, for example, drillers are expected to pump out 3.2 million acre-feet of water - as much as New York City uses in two and a half years.

It is primarily this immense draining of aquifers by thousands of wells that makes drilling for coal-bed methane so environmentally intrusive. Conventional gas wells are usually much deeper and more expensive to dig, and do not drain huge quantities of groundwater.

This water can, of course, be a godsend to ranchers - if it is not too salty and shows up in a convenient place and in usable amounts. But if the water is contaminated with salts, as much of it is in Wyoming and across the West, it can turn pasture barren.

In addition, coal-bed methane wells often produce far more water than a rancher can conceivably use. Besides causing damaging erosion, too much water can sharply lower water tables, sometimes for decades, while drying up nearby wells and ruining natural springs used by wildlife. Methane drilling can also send unwanted gas into nearby stock troughs, house wells and creek beds.

These consequences can make ranchers loathe companies that extract methane.

"Polarization and demonization are absolute hallmarks of drilling for coal-bed methane," said Mickey Steward, director of the Coal Bed Methane Coordination Coalition, a Wyoming group that tries, and often fails, to make peace between agitated ranchers and impatient producers. Energy producers stopped giving the group money, complaining that it was too sympathetic to ranchers and environmentalists. The coalition now relies on state and county taxes.

"On one side, the producers feel very strongly they are helping to preserve the American way of life," Ms. Steward said. "On the other side, drilling is changing the lives of ranchers who are just not used to having anybody affect where they live except for themselves."

Compounding the anger is the fractured ownership of land in much of the Rocky Mountain West. Far more than in other parts of the country with oil and gas reserves, landowners here do not own the wealth under them. Farmers and ranchers settled more than 30 million acres of the West under the Stock Raising Homestead Act of 1916. The act's rules, in almost all cases, granted mineral rights not to homesteaders but to the federal government.

Companies that lease these rights from the Bureau of Land Management have access to ranch land, whether ranchers want them there or not. Producers almost always try to make

surface-use agreements with ranchers. But even without landowner consent, federal law allows them to build roads, pipelines, power lines, compressor stations and well pads, as well as to dam gullies and build wastewater reservoirs.

"Ways of life are being changed for the purpose of energy extraction," said Jim Ventrello, a Republican county commissioner in Delta County, Colo., "and it is not the quality of life that we seek here."

That overwhelmingly Republican rural county in western Colorado banned coal-bed methane operations this year. "We heard horror stories from other places in the West," Mr. Ventrello said, "and we decided not to allow this to go forward unless we can make sure it is done right."

Delta, though, is one of only two counties in the West to slam the brakes on coal-bed methane. While energy companies are vigorously challenging the county moratoriums in the courts, coal-bed methane extraction is continuing to hurtle forward across much of the West, thanks to policies put in place by the Clinton administration and accelerated under President Bush, with the encouragement of state governments that rely on tax money from gas drilling.

## The Need for More Gas

The eagerness of energy companies and the Bush administration to produce more coal-bed methane can be explained by these numbers: The United States consumes about 23 trillion cubic feet of natural gas a year, nearly all domestically produced. By 2020, demand is expected to jump by about a third, according to government projections.

The main hope for finding supplies to meet that demand in the long term is the Gulf of Mexico, the country's single largest natural gas resource. But energy companies and the White House see coal-bed methane from the interior West, the country's second-largest gas resource, as a vital part of the short-term solution.

The cost difference between conventional and coal-bed methane drilling is extraordinary. A conventional well on land usually costs several million dollars. An offshore well costs tens of millions. A coal-bed methane well can be dug for about $90,000.

Coal-bed methane accounts for only about 9 percent of the country's proven natural gas reserves, or less than one year's production at current consumption levels, according to the Energy Department. But over the last decade, estimates of likely reserves have soared.

The federal Energy Information Administration has described the Rockies as having the potential to become "a Persian Gulf of natural gas."

There are serious questions, however, about how real that potential is. "In the 1970's, oil shale was hailed as our energy salvation, and it turned into a huge bust," said Pete Morton, an economist with the Wilderness Society. "This could be history repeating itself."

In a new assessment released in mid-December, the United States Geological Survey

said coal seams in five Western basins, including Powder River, might contain a total of 42 trillion cubic feet of additional gas. The agency, which said in 1995 that Powder River probably held undiscovered coal-bed methane resources of 1.5 trillion cubic feet, raised that estimate to 14.3 trillion cubic feet in its current study.

Another study, commissioned by the Energy Department and released in December, was even more optimistic. It estimated undiscovered coal-bed methane in the basin at 39 trillion cubic feet, or nearly two years' worth of national consumption.

Even if they are accurate, such estimates often gloss over how much gas is economically recoverable. In the Powder River Basin, the Energy Department study said that as much as 29 trillion cubic feet might be recovered in a cost-effective way. But it noted that the number could vary widely, depending on how particular environmental safeguards were adopted.

Environmentalists say any realistic cost-benefit analysis makes coal-bed methane look much less rosy.

## More Drilling Than Grazing

In the San Juan Basin of New Mexico, where ranch land is as rugged as any in the West, gas wells outnumber cattle two to one. Over the last 15 years, the basin has been the pioneer in the coal-bed methane process.

Pinon and juniper woodlands are interwoven with thousands of miles of roads and pipelines. With 20,000 gas wells in production and at least 10,000 more planned, a swath of federal land the size of Connecticut accounts for 80 percent of the coal-bed methane produced in the United States.

Increasingly, however, the state's pride in coal-bed methane, which is a major source of tax revenue, is mixed with misgivings. Ranchers like Tweeti Blancett, a sixth-generation New Mexican, warn that a fragile balance between production and conservation is falling badly out of whack.

"We are a multiple-use land, and we understand that," Ms. Blancett said the other day, bouncing along roads rutted by drilling rigs and water tankers on land that is owned by the federal government but leased for both ranching and energy exploration. "But we want industry to understand that there are other users out there."

Ms. Blancett, a lifelong Republican, was Mr. Bush's political organizer in northwestern New Mexico for the 2000 presidential campaign. In November, she and her husband, Linn, and two other ranching families locked out energy companies whose plumbing of the gas beneath the surface of the land, they say, threatens their livelihood.

They call it an act of desperation. The industry has derided it as a publicity stunt. But many in New Mexico describe it as emblematic of a growing unease about the effect of coal-bed methane on the state's landscape and the ranchers' way of life.

"It would be disingenuous to pretend that there aren't impacts," said Steve Henke, director

of the land management bureau office in Farmington, N.M. He oversees nearly all energy exploration in the basin because the federal government owns all but a tiny fraction of the land.

"If people are looking for peace and quiet and solitude, they're not going to find it in the oil patch," Mr. Henke said.

Oil and gas exploration is not new to the basin. The first drilling rigs arrived nearly a half-century ago. But it was not until the late 1980's, when drilling began to increase, that the relationship between ranchers and energy companies turned adversarial.

"It may be a clean fuel," said Don Schreiber, a rancher who joined the Blancetts and another rancher, Chris Velasquez, in locking out the energy companies, "but it is a very dirty business."

Across the basin, energy exploration occupies 8 percent of the land. Coal-bed methane production has pumped out 5.8 billion gallons of groundwater since the late 1980's. Nearly all of this water - most of it unsuitable for drinking or agriculture - has been reinjected deep underground.

Energy leases in the San Juan Basin date from the 1950's and 1960's, long before coal beds were explored for natural gas. The leases have allowed producers broader latitude than would be permitted under tighter environmental regulations today.

Ranchers say the effects have been upsetting, including cattle killed by traffic and spilled chemicals, and erosion set in motion by roads, pipelines and drilling pads.

The land bureau concedes that its oversight has failed to keep pace, and it has stepped up enforcement. Partly because of the impact of drilling, the bureau has reduced the number of cattle it allows to graze on federal land. The year-round total is now fewer than 10,000 head, down from the hundreds of thousands that roamed the dry highlands early this century.

In financial terms, ranchers in the basin have become insignificant tenants on federal land. They pay the government a total of about $100,000 a year for grazing rights. Energy companies pay about $350 million in federal royalties on gas they produce.

Against that backdrop, Mr. Henke says it may be wrong to imagine that the interests of ranchers and energy production can be balanced to the satisfaction of all.

"Ranchers are losing out to the energy industry in terms of their capability to grow grass," Mr. Henke said.

"Stepping back, though, what's in the public interest? It's not that this area is unsuited to ranching. But we've got a world-class gas resource here."

The Big Gas Play in Wyoming

Early next year, the federal regulatory gates are set to swing open in the Powder River

Basin. When they do, there is almost certainly going to be a rush by ranchers to hire lawyers and file lawsuits.

Part of the reason is split ownership of land. Of the eight million acres in the basin, three-quarters of the surface rights are privately owned, while about two-thirds of subsurface rights are federally owned and leased to energy companies.

These numbers mean that most of the basin's 4,000 ranch families will have no choice but to put up with strangers on their land for the next 10 to 15 years. Except for nominal access fees, most ranchers will get little financial benefit from the hundreds of millions of dollars in gas revenue generated beneath their land.

As it is in the San Juan Basin, the land bureau will be charged with a seemingly impossible task. Under orders from the Bush administration - which requires the agency to fill out an "energy impact statement" whenever it denies a drilling permit - the agency is expected to cut through red tape and make it easy for drilling companies to get to work fast.

But the agency will also have to deal with increasingly angry ranchers, litigious environmental groups and a nervous state on Wyoming's northern border. They have all had a sneak preview of the fuss coal-bed methane can cause.

So has Wyoming's governor-elect, Dave Freudenthal, a Democrat. He believes that the ranchers' restiveness and the threat of environmental damage from coal-bed methane are "huge problems," said his chief of staff, Phil Noble.

Drilling began about five years ago on state and private land in the Powder River Basin. More than 15,000 wells are already in the ground. While many have been well managed, some have triggered uncontrolled water runoff, flooded pastures, eroded land and pumped large amounts of salty water into streams and creeks.

Rivers from the basin flow north to Montana, where irrigators have pressured their own government to demand strict limits on the salinity of the water that comes out of Wyoming.

In the last year, the land bureau has lost two court challenges to its environmental plan for opening federal lands to gas drilling in the basin. A rewrite of the plans is expected in January, and the agency says it is ready to handle the permitting of 39,000 new wells, while protecting the environment.

"We have staffed up to handle the situation," said Richard Zander, resource manager for the agency in Buffalo, Wyo. "Our intent is not to leave a scar on the land."

Local environmental groups and many ranchers are skeptical. They point out that federal and state law does not require energy companies to repair all drilling damage. Companies do have to put up bonds, but they cover only the removal of drill pads and water impoundment ponds - not the removal of roads and other scars.

Ranchers can negotiate binding surface agreements to cover such damage, but to do so they need legal help.

"If you have enough money to spend on lawyers, you might get somewhere," said Jill Morrison, senior organizer for the Powder River Basin Resource Council, a local environmental group.

Then, as always in the arid West, there is the question of water. Little of the 3.2 million acre-feet of water pumped out in the Powder River Basin will be pumped back into the ground. Companies say it is too expensive. Some water will naturally filter back into the ground, and some can be used for livestock or crops, but the federal government estimates that 57 percent to 85 percent will be lost to runoff and evaporation.

Neither Wyoming nor the federal government assigns any monetary value to the wasted water, state and federal officials say. Accordingly, energy companies need pay nothing for its disappearance.

Because of the water issue - and the high probability that drilling in the Powder River Basin will disturb wildlife - one prominent energy executive in Wyoming says that coal-bed methane drilling cannot be considered environmentally sound.

"Looking after the Earth is a pay-as-you-go process, but they don't have a plan like that here," said Raymond Plank, chairman of the board of Apache Corporation, one of the largest independent natural gas and oil companies in the United States. It does not operate coal-bed wells in Wyoming.

"What happened here is ready, fire, aim," Mr. Plank said.

He said that if energy companies had to pay for the water they waste, as well as put up bonds to cover all costs of restoring land when wells run dry, they would not make money in the basin.

"I don't happen to think that this gas here is probably economically viable with responsible land and water practices," he said.

Mr. Plank, it should be noted, has a Wyoming rancher's bias. A 20,000-acre ranch he has owned for decades and recently donated to a nonprofit foundation has been scarred by coal-bed methane drilling.

**http://www.nytimes.com/2002/12/29/national 29METH.html?ex=1042270904&ei=1&en=e78017e6dea65a93**